Government Information Technology Agency

# Statewide STANDARD

P800-S815 Rev 2.0

TITLE: Configuration
Management

Effective Date: April 5, 2004

#### 1. AUTHORITY

The Government Information Technology Agency (GITA) shall develop, implement and maintain a coordinated statewide plan for information technology (IT) (A.R.S. § 41-3504(A (1))) including the adoption of statewide technical, coordination, and security standards (A.R.S. § 41-3504(A (1(a)))).

## 2. PURPOSE

To establish a statewide inventory program of IT devices (servers, storage, clients), network components, associated software products, and IT business applications for all budget units, supported by the *Information Services Inventory System (ISIS)* web-based application. The standard also provides requirements for the tracking of changes to system and software components.

#### 3. SCOPE

This applies to all budget units. Budget unit is defined as a department, commission, board, institution or other agency of the state organization receiving, expending or disbursing state funds or incurring obligations of the state including the board of regents and the state board of directors for community colleges but excluding the universities under the jurisdiction of the board of regents and the community colleges under their respective jurisdictions and the legislative or judicial branches. A.R.S. § 41-3501(2).

The Budget Unit Chief Executive Officer (CEO), working in conjunction with the Budget Unit Chief Information Officer (CIO), shall be responsible for ensuring the effective implementation of Statewide Information Technology Policies, Standards, and Procedures (PSPs) within each budget unit.

#### 4. STANDARD

- 4.1 Configuration management is the management process for establishing and maintaining consistency of an IT component's performance, functional, and physical attributes with its requirements, design, and operational information throughout its life. Each budget unit shall establish a configuration management program that defines organizational responsibilities and processes that document and provide accountability for changes to devices and/or associated software components in the production IT environment. Configuration management programs should contain the following elements:
  - Consistent, unique identification of devices and/or associated software components.
  - Documented change control for coordination of all changes/updates to devices, operating system software, and/or associated software components, including when and how they are made, and by whom.

• Status accounting to track the state of all configuration items, pending changes, and approved changes to configuration items.

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• Verification and auditing to ensure that the processes function as designed.

ISO 10007:1995, *Quality Management – Guidelines for Configuration Management* and ANSI/EIA 649:1998, *National Consensus Standard for Configuration Management* provides broad, general guidance, applicable to both hardware and software components, on how to design, structure and implement configuration management programs.

- 4.2 Each budget unit shall maintain a perpetual inventory as well as configuration/version information for all IT devices and associated software assets, and IT applications, on the Statewide Information Services Inventory System (ISIS).
  - 4.2.1 The *Information Services Inventory System (ISIS)* can be accessed through the web with the following URL:

    <a href="http://www.azgita.gov/apps">http://www.azgita.gov/apps</a>. Click on the "Information Services Inventory System (ISIS)" line, the system will then ask for a username and password (assigned by GITA). Please call GITA at (602) 364-4482 or email <a href="mailto:cmuir@azgita.gov">cmuir@azgita.gov</a> for a username and password.
  - 4.2.2 *ISIS* is designed to inventory and track the IT product groups detailed in the *Inventory Naming Standards for Group, Type, and Code* link on http://www.azgita.gov/apps.
    - a. **End User Devices** PC's, Mac's, Net PC's, Network Computers, etc.
    - b. **Mainframes** IBM z900/800, Hitachi MP series, etc.
    - c. **Minicomputers** HP9000, DPS6, VS5600, etc.
    - d. **Server** Multi- or single processor
    - e. **Software** Asset/Network Management, operating system, database, office productivity, utilities, etc.
    - f. **Telecommunications** Routers, LAN Switches, Firewalls, wireless access points, etc.
  - 4.2.3 Even though ISIS is a perpetual inventory system, each budget unit shall ensure that its inventory is as accurate as possible by July 31st of each fiscal year.
  - 4.2.4 Required and optional data fields for each inventory record can be found under the *Import File Format* link that appears on <a href="http://www.azgita.gov/apps">http://www.azgita.gov/apps</a>. Definitions for each field are as follows:

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- 4.2.4.1 **Location** This optional filed is strictly for budget unit use. The budget unit determines whether this field is used and how locations are reported.
- 4.2.4.2 **City** Optional for budget unit use.
- 4.2.4.3 **Manufacturer** Contains a list of manufactures and software publishers to choose from. If the name is unknown, list or choose "Other."
- 4.2.4.4 **Serial Number** Either the Serial Number or the Asset Tag Number must be provided in order to save the information about the device. Serial Numbers for software are required to save the record.
- 4.2.4.5 **Asset Tag Number** Either the Asset Tag Number or the Serial Number is required in order to save the information about the hardware asset. Asset Tag Number is not a selection for software.
- 4.2.4.6 **Asset Group** This required field organizes all assets into one of six high level categories. Choose from the drop down list in the field. Whatever is selected in Asset Group will determine choices in Asset Type.
- 4.2.4.7 **Number of Licenses** This is a required field for software assets only. This enables the reporting of software assets in aggregate. Example: If the budget unit had 100 copies of Microsoft Office XP/2000, then you would place "100" in this field. However, agencies may report software individually, inputting serial numbers for each registered copy, if they so desire. In this case, number of licenses would be recorded as "1" per record.
- 4.2.4.8 **Asset Type** Another required field that organizes assets into categories. Choose from the drop down list in the field. Asset Type determines Asset Code. Choose "Other" if the asset does not fall into any other category.
- 4.2.4.9 **Maintenance Type** This optional field provides a way for the budget unit to track how the hardware asset is maintained. Select from one of the options in the drop down list.
- 4.2.4.10 **Asset Code** The lowest level used to organize assets into categories. This required field also has "Other" as an acceptable selection in case there is not an appropriate category in the drop down list.
- 4.2.4.11 **Maintenance Vendor** An optional field that allows the input of the vendor that maintains the hardware asset.
- 4.2.4.12 **Model** Allows for the input of the device model.
- 4.2.4.13 **Version** Allows the input of software versions, at the budget unit's option. This file is only present when inputting software assets.

4.2.4.14 **Acquisition Date** – An optional field that allows the budget unit to capture the date the asset was purchased. Agencies also have the option of using this field to capture the received date, billed date, or any other alternative date that is more useful to them.

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- 4.2.4.15 **Asset Status** Identifying State assets that are owned, leased, or employed by the State. "Employed" means an asset in use by State employees while doing their jobs, but owned by another entity such as the federal government, for example.
- 4.2.4.16 **Unit Cost** An optional field that allows a budget unit to input the cost of the asset.
- 4.2.4.17 **Disposition** An optional field that allows a budget unit to retire an asset while keeping a record of it. The drop down list provides a variety of choices for how an asset may leave State service.
- 4.2.4.18 **Disposition Date** The date the asset leaves State service, optional field.
- 4.2.4.19 **Comments** Any additional information about the asset may be place here, at the budget unit's discretion.
- 4.2.5 Standard names for Manufacturer, Disposition, Maintenance Type and Status fields can be found by following the link on <a href="http://www.azgita.gov/apps">http://www.azgita.gov/apps</a>.
- 4.2.6 If the budget unit's IT inventory is maintained in a software system other than *ISIS*, the budget unit can electronically upload the information in a Comma Separated-Values (CSV) file format within ISIS. The CSV file format and field types must agree with the Import File Format listed under the link on <a href="http://www.azgita.gov/apps">http://www.azgita.gov/apps</a>. The IT Inventory Naming Standards shall be used for all required and optional fields, see the links on <a href="http://www.azgita.gov/apps">http://www.azgita.gov/apps</a>.
- 4.2.7 Identification of all IT applications within the budget unit is also a requirement of *ISIS*. The following is a list of data elements and definitions for IT applications:
  - 4.2.7.1 **Application Name** Provide full name of the application followed by its acronym, example: Arizona's Financial Information System (AFIS) or Human Resource Information System (HRIS).
  - 4.2.7.2 **Application Description** A brief description of the application.
  - 4.2.7.3 **High Level Category** Provides seven categorizations of applications. Choose "Agency Administration" if none of the categories apply.

4.2.7.4 **Functional Adequacy** – This signifies the budget unit's evaluation of how functionally adequate the application is in providing the desired service. Select high, medium or low

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- 4.2.7.5 **General Category** This field attempts another level of categorization of applications. Use "Other" if none of the categories seems applicable.
- 4.2.7.6 **Strategic Importance** The budget unit's evaluation of the applications' strategic importance to the budget unit's mission. It is possible for an application to have high strategic importance and yet be listed as non-critical. Select high, medium or low.
- 4.2.7.7 **Application Platform** Select the platform on which the application is built. There are four selections: Mainframe, Minicomputer, Server, and Standalone PC.
- 4.2.7.8 **Lifecycle** Choose the application's lifecycle stage. Choose Development if the application has not been placed in production. Choose Retirement if the application will soon be or is no longer in service. You may also delete the application if it is no longer in service.
- 4.2.7.9 **Database** Please select the database that captures the information within the application. If the database is not listed, select "Other" and type the database name in the Other field.
- 4.2.7.10 **Presentation Type** Identifies the user's interaction or experience with the application. Select "Client/Server" for all non-web applications that have a graphic user interface (GUI). Select "CRT" for dumb terminals and or DOS applications on PCs. Select "Terminal Emulation" for applications with CRT-like presentations that are accessed using a PC and may have GUI-like characteristics because of third-party software. Select "Web" for Internet/Intranet applications using a client browser for presentation.
- 4.2.7.11 **Origin** This field identifies how the application was originally acquired by the budget unit. Choose "Combination" if the application was acquired from more than one of the other sources listed.
- 4.2.7.12 **Critical** Choose "Yes" if this application is critical. The evaluation of Critical is left up to the agencies. Some guidelines may include whether the public health or safety is in jeopardy if this application is not working for longer than 24 hours; whether the budget unit will likely have legal suit filed against it if the application is not working within 72 hours; if there is a court order or statutory requirement for the application to be available within specific time frames. It is possible for an application to

have high strategic importance and yet be listed as non-critical.

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- 4.2.7.13 **Program Tools** Select as many program tools as necessary from the list provided. Hold down the control key while clicking on more than one program tool listed. If you don't see a particular program tool, you may select "Other" and type it in the field.
- 4.2.7.14 **Estimated Users** Round to the nearest whole number, the number of estimated people that access your application.
- 4.2.7.15 **Comments** This field is strictly for budget unit use in any manner they choose.
- 4.2.8 Each budget unit shall maintain a high-level budget unit network/ systems diagram, supported by detail diagrams identifying the underlying structures of its computer/systems network. This includes IT devices, network components (including all nodes and connections), communication equipment, software, links, and services, etc., used in communicating reliable transfers of information. These diagrams will map the budget unit's architecture/infrastructure, which can then be used for information systems planning.
  - 4.2.8.1 Network / systems diagrams shall be submitted to GITA by July 31<sup>st</sup> of each fiscal year, along with the budget unit's perpetual inventory. Budget units should use a software business/technical diagramming tool for recording network / systems designs.
  - 4.2.8.2 Network / systems diagrams should be computer-generated, using software tools, checked periodically to ensure that no unauthorized changes have been made, and readily accessible to authorized budget unit personnel.

## 5. DEFINITIONS AND ABBREVIATIONS

Refer to the PSP Glossary of Terms located on the GITA website at <a href="http://www.azgita.gov/policies">http://www.azgita.gov/policies</a> standards/ for definitions and abbreviations.

#### 6. REFERENCES

- 6.1. A. R. S. § 41-621 et seq., "Purchase of Insurance; coverage; limitations, exclusions; definitions."
- 6.2. A. R. S. § 41-1335 ((A (6 & 7))), "State Agency Information."
- 6.3. A. R. S. § 41-1339 (A), "Depository of State Archives."
- 6.4. A. R. S. § 41-1461, "Definitions."
- 6.5. A. R. S. § 41-1463, "Discrimination; unlawful practices; definition."
- 6.6. A. R. S. § 41-1492 et seq., "Prohibition of Discrimination by Public Entities."
- 6.7. A. R. S. § 41-2501 et seq., "Arizona Procurement Codes, Applicability."
- 6.8. A. R. S. § 41-3501, "Definitions."
- 6.9. A. R. S. § 41-3504, "Powers and Duties of the Agency."

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- 6.10. A. R. S. § 41-3521, "Information Technology Authorization Committee; members; terms; duties; compensation; definition."
- 6.11. A. R. S. § 44-7041, "Governmental Electronic Records."
- 6.12. Arizona Administrative Code, Title 2, Chapter 7, "Department of Administration Finance Division, Purchasing Office."
- 6.13. Arizona Administrative Code, Title 2, Chapter 10, Department of Administration Risk Management Section."
- 6.14. Arizona Administrative Code, Title 2, Chapter 18, "Government Information Technology Agency."
- 6.15. Statewide Policy P100, Information Technology.
- 6.16. Statewide Policy P800, IT Security.
- 6.17. State of Arizona Target Security Architecture, <a href="http://www.azgita.gov/enterprise">http://www.azgita.gov/enterprise</a> architecture.

## 7. ATTACHMENTS

None.